

C<sup>5</sup>  
pectic acid, polyglycans, polymannan, agar, agarose,  
natural gum and glycosamino glycans.

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C<sup>4</sup>  
19. (twice amended) The industrial or medical  
articles or devices coated with the haemocompatible  
material according to any of claims 9 - 16 wherein said  
articles or devices are selected from the group  
consisting of catheters, guide channels, probes, cardiac  
valves, soft tissue prostheses, prostheses of animal  
origin, cardiac valves from pigs, artificial tendons,  
bone replacements or cardiovascular prostheses, contact  
lenses, blood oxygenators, artificial kidneys, hearts,  
pancreas and livers, blood bags, syringes, surgical  
instruments, filtration systems, laboratory instruments,  
containers for cultures and for cell and tissue  
regeneration, supports for peptides, proteins and  
antibodies.

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#### REMARKS

It is requested that this Supplemental  
Amendment be entered as a further response to the Office  
Action of September 4, 2001.

Claim 3 has been corrected to recite --B<sub>1</sub>-- in  
place of "B<sub>2</sub>". Claim 4 has been amended to point out that  
hyaluronic acid derivatives are the referenced materials.  
Claim 6 has been amended to point out that "at least one"  
carboxylic function is present in accordance with  
original claim 6. This has been done because the residue  
of a sulphated hyaluronic acid derivative may contain  
more than one free carboxylic function. The definition of  
"HSulph" as a residue of a sulphated hyaluronic acid or a  
residue of a sulphated hyaluronic acid derivative  
containing at least one free carboxylic function is a  
clear description because while hyaluronic acid has a  
complex structure, in formulas (I) and (II), the  
hyaluronic portion has a marginal position and the  
essential parts of these molecules are clearly

illustrated.

In claim 19, the term "such as" has been deleted. In claim 12, the term "or their fragments" has been reinserted in accordance with original claim 12. This term is commonly used to indicate a piece of a protein. A copy of page 1070 of the Sigma Catalog is enclosed which illustrates the use of this term.

The term "semisynthetic" has been reinserted in claims 13 and 15 in accordance with the original claims. "Semisynthetic" is a self explanatory term that requires no further explanation. The specification at page 5, lines 1-24 provides further information and in fact this term indicates a polymer which is for example constituted by a natural polymer reacted with a synthetic compound. This term is commonly used to indicate such products and is used in U.S. 6,027,741 which is of record in the present application.

It is believed that the prior Amendment and the present Supplemental Amendment provide a complete response to the Office Action.

An early and favorable action is earnestly solicited.

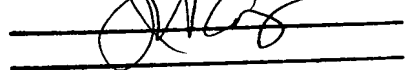
Respectfully submitted,



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Marked up copy of Amendment to Specification:

By sulphated hyaluronic acid and sulphated hyaluronic acid derivatives, we mean:

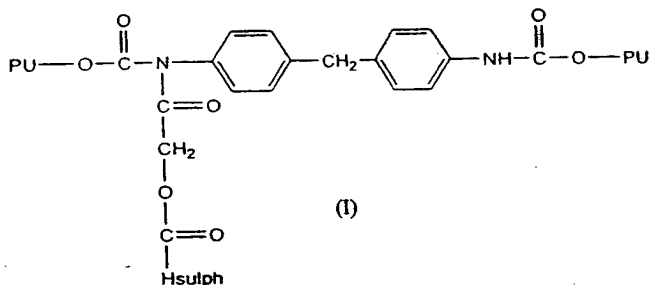
- A<sub>1</sub>) O-sulphated hyaluronic acid, and  
[B<sub>1</sub>)] A<sub>2</sub>) O-sulphated hyaluronic acid derivatives,  
both types being disclosed in U.S. Patent No. 6,051,701,  
which is incorporated herewith by reference;  
B<sub>1</sub>) N-sulphated hyaluronic acids, and  
B<sub>2</sub>) N-sulphated hyaluronic acid derivatives,  
both types being obtainable by means of a controlled  
sulphatiuon reaction on the amino group of glucosamine of  
hyaluronic acid, previously deacetylated according to the  
procedure described by P. Shaklee (1984) Biochem. J.,  
217, 187-197. The reaction proceeds as illustrated below:

Marked up copy of Amended Claims:

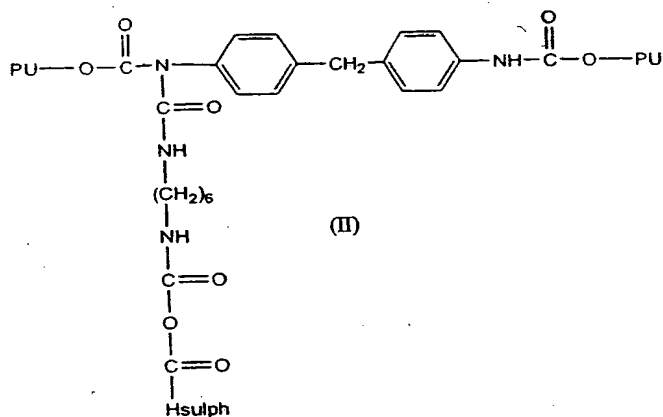
3. (three times amended) The polyurethane according to claim 1, wherein the said sulphated hyaluronic acid is selected from the group consisting of:  
A<sub>1</sub>) O-sulphated hyaluronic acid, and  
[B<sub>2</sub>)] B<sub>1</sub>) N-sulphated hyaluronic acid.

4. (three times amended) The polyurethane according to claim 1, wherein the said sulfated hyaluronic acid derivative is selected from the group consisting of:  
[A<sub>1</sub>)] A<sub>2</sub>) O-sulphated hyaluronic acid derivative, and  
B<sub>2</sub>) N-sulphated hyaluronic acid derivative.

6. (twice amended) The polyurethane according to claim 1 of formula(I)



or formula (II)



wherein PU is a residue of the polyurethane chain, Hsulph is a residue of the sulphated hyaluronic acid or a residue of a sulphated hyaluronic acid derivative containing at least one free carboxylic function.

12. (twice amended) The haemocompatible material according to claim 11, wherein said pharmaceutically active substance is selected from the group consisting of antibiotics, anti-infective, antimicrobial, antiviral, cytostatic, antitumoral, anti inflammatory, wound healing agents, anesthetics, cholinergic or adrenergic agonists or antagonists, antithrombotic, anticoagulant, haemostatic, fibrinolytic, thrombolytic agents, proteins or their fragments, peptides, polynucleotide, growth factors, enzymes and vaccines.

13. (twice amended) The haemocompatible material according to claim 9, further comprising at least one natural, [or] synthetic or semisynthetic polymer.

15. (twice amended) The haemocompatible material according to claim 13, wherein said semisynthetic polymer is selected from the group consisting of collagen cross linked with aldehydes, dicarboxylic acids or their halides, diamines, derivatives of cellulose, hyaluronic acid, chitin or chitosan, gellan, xanthane, pectin or pectic acid, polyglycans, polymannan, agar, agarose, natural gum and glycosamino glycans.

19. (twice amended) The industrial or medical articles or devices coated with the haemocompatible material according to any of claims 9 - 16 wherein said articles or devices are selected from the group consisting of catheters, guide channels, probes, cardiac valves, soft tissue prostheses, prostheses of animal origin, cardiac valves from pigs, artificial tendons, bone replacements or cardiovascular prostheses, contact lenses, blood oxygenators, artificial kidneys, hearts, pancreas and livers, blood bags, syringes, surgical instruments, filtration systems, laboratory instruments, containers for cultures and for cell and tissue regeneration, supports for peptides, proteins and antibodies.